

# FACT SHEET

## PROPOSED RULES FOR COMMERCIAL AND INDUSTRIAL SOLID WASTE INCINERATION UNITS

### TODAY'S ACTION

- The Environmental Protection Agency (EPA) is issuing proposed standards and emission guidelines to reduce air pollution from commercial and industrial solid waste incineration (CISWI) units. The standards and guidelines would apply to incinerators used by commercial and industrial facilities to burn non-hazardous solid waste.
- EPA is proposing air emission standards to reduce air pollution from "new" CISWI units (those built after the publication date of this proposal). EPA is also proposing air emission guidelines for use by States in developing plans to reduce air pollution from "existing" CISWI units (those built on or before the publication date of this proposal).
- The proposed standards and emission guidelines would substantially reduce emissions of a number of harmful air pollutants such as lead, cadmium, mercury, and dioxins/furans, which are known or suspected to cause adverse health and environmental effects.

### BACKGROUND

- The Clean Air Act requires EPA to set air emission standards and guidelines to reduce pollution from incinerators that burn solid waste. These are the first Federal standards and guidelines regulating air emissions from commercial and industrial incinerators burning non-hazardous solid waste. Previously these incinerators were only subject to State and local requirements, where applicable.
- EPA estimates that there are approximately 120 commercial and industrial incinerators burning non-hazardous solid waste in the U.S.

### WHAT TYPES OF WASTE COMBUSTION WOULD BE COVERED BY THIS RULE?

- This proposed rule would apply to the combustion of non-hazardous solid waste at commercial and industrial incinerators. Waste materials such as off-specification products, industrial sludges, plastic and synthetic materials, wood wastes, construction and demolition materials, and other types of commercial and industrial wastes would be covered.
- This rule would not apply to the combustion of hazardous, municipal, medical, pathological or agricultural wastes, as these other types of waste are, or will be, regulated under other standards.

### WHAT AIR STANDARDS IS EPA ISSUING FOR NEW CISWI AND WHO WILL BE AFFECTED BY THESE STANDARDS?

- The proposed standards for new units would affect any CISWI unit which is built after the date the proposal is published in the Federal Register. The standards would establish limits on the amount of air pollution which may be released from exhaust stacks at CISWI facilities. There are separate limits for cadmium, carbon monoxide, dioxins/furans, hydrogen chloride, lead, mercury, nitrogen oxides, opacity, particulate matter, and sulfur dioxide.
- EPA based these emission limits on stringent air pollution controls known as maximum achievable control technology, or MACT. In order to meet the emission limits, new CISWI

units would likely need to install add-on air pollution control systems called "wet scrubbers."

- The proposed standards include monitoring and testing, operator training and qualification, and new unit siting requirements. A waste management plan would also be required.

#### **WHAT GUIDELINES IS EPA PROPOSING FOR EXISTING CISWI AND WHO WILL BE AFFECTED BY THESE GUIDELINES?**

- The proposed emission guidelines for existing CISWI would require States to develop plans for EPA approval which would affect any unit built on or before the date the proposal is published in the Federal Register. The State plans would be required to establish limits on the amount of air pollution which may be released from the exhaust stacks of all CISWI units in the State, and these plans must be at least as stringent as EPA's emission guidelines. Similar to the proposed standards for new sources, there would be separate emission limits for nine pollutants and opacity based on stringent pollution controls known as MACT. As with new units, most existing CISWI units would need to install wet scrubbers to meet the emission limits.
- The proposed guidelines also would require monitoring and testing, operator training and qualification, and a waste management plan.

#### **WHEN WOULD FACILITIES HAVE TO COMPLY WITH THIS ACTION?**

- Following the public comment period on today's proposed action, EPA intends to finalize the emission guidelines and standards for commercial and industrial solid waste incinerators in 2000.
- New units would have to be in compliance with the emission standards within 6 months after the date EPA takes final action on this rulemaking or 6 months after start-up, whichever is later. Existing units would have to be in compliance with the guidelines as expeditiously as practicable after approval of a State plan, but no later than 3 years after the State plan is approved or 5 years after EPA takes final action on the emission guidelines, whichever is earlier.

#### **WHAT WOULD THE ENVIRONMENTAL AND HEALTH BENEFITS OF THIS ACTION BE?**

- This proposed rule would provide important improvements in protecting human health and the environment by reducing air pollutant releases. EPA estimates the proposed rule, when fully implemented, would result in the following annual reductions:

<u>Pollutant</u>	<u>Emission Reductions</u>	<u>Percent Reduction</u>
Particulate Matter	over 400 tons	about 70 %
Hydrogen Chloride	over 1300 tons	about 90 %
Cadmium	over 0.4 tons	about 90 %
Mercury	over 0.04 tons	about 80 %
Lead	over 30 tons	about 90 %
Dioxins/Furans	over 5 grams	about 90 %
Sulfur Dioxide	over 320 tons	about 70 %

When present at certain environmental concentrations, these pollutants pose the following human health and environmental hazards.

- Exposure to particulate matter has been linked with adverse health effects, including aggravation of existing respiratory and cardiovascular disease and increased risk of premature death.
- Chronic exposure to hydrogen chloride has been reported to cause gastritis, chronic bronchitis, dermatitis and photosensitization. Acute inhalation exposure may cause eye, nose, and respiratory tract irritation and inflammation, and pulmonary edema, in humans.
- Exposure to dioxins and furans causes cancer in animals, and is believed likely to cause cancer in humans. Humans exposed to dioxins and furans may also experience chloracne (a serious skin disorder) and changes in hormone and enzyme levels, the significance of which is not understood.
- This proposal would also reduce several toxic air pollutants such as lead and mercury. Exposure to lead occurs through inhalation of lead-contaminated air and ingestion of lead in food, water, soil and dust. Lead causes irreversible central nervous system damage and anemia in children, and can adversely affect the nervous and circulatory systems in adults. Mercury is also of concern because it persists in the environment and bioaccumulates through the food web. Serious developmental and adult effects in humans, primarily damage to the nervous system, have been associated with exposures to mercury.
- The proposed action would reduce sulfur dioxide emissions by over 300 tons annually. Sulfur dioxide can result in significant health problems and also is a major cause of acid rain, which is associated with acidification of soils, lakes, and streams, accelerated deterioration of buildings, and reduced visibility.

#### **HOW MUCH WOULD THE COST OF COMPLYING WITH THE EMISSION GUIDELINES AND STANDARDS BE?**

- The annual costs for new CISWI units, including wet scrubbing, monitoring and testing, and operator training and qualification, are expected to range from about \$69,000 to \$186,000, depending on the size of the unit. Annual costs for existing units may be in the same range, but would depend on what types of controls are already in place, if any.
- When fully implemented five years after promulgation of this action, the total cost of the regulations would be about \$11.6 million/year. Cost-to-sales ratios (i.e., the ratio of control requirement costs to company sales) are generally low (well below 3 percent for most CISWI units), and costs of production and consumer prices are not expected to significantly increase.

#### **FOR MORE INFORMATION**

- Interested parties can download the proposed standards and emission guidelines from EPA's web site under "recent actions" at the following address:  
<http://www.epa.gov/ttn/oarpg>. For further information about the proposal, contact Fred Porter at EPA's Office of Air Quality Planning and Standards at 919-541-5251.
- For information regarding commercial and industrial solid waste incineration, visit EPA's web site at: <http://www.epa.gov/ttn/atw/129/ciwi/ciwiipg.html>. For other combustion-related regulations, visit EPA's Combustion Related Rules page at:  
<http://www.epa.gov/ttn/atw/combust/list.html>.